Qt Group

Qt Foundation Certificate Curriculum

Qt 6.12 LTS

PUBLIC

1. Qt Foundation (Qt 6.12 LTS)

This test is for the Qt Foundation level. It is the first level in the Qt Framework certification path. It will cover the following topics: what Qt is, creating and building projects with Qt Creator, Qt object model, signals and slots, meta-type system and QVariant, basic event handling, properties, basic containers, and string handling. After passing the test and proctoring, you will be awarded the Qt Foundation certificate.

The exam contains 50 single- and multi-select questions and the passing score is 70%.

Qt Development Basics

- How Qt interfaces with the operating system
- Logging and debug messages
- Application objects in Qt

Qt Object Model

- QObject
- Value types
- Parent/child relationship
- Stack and heap allocations

Value-based Classes

- The concept of implicit sharing
- Memory allocation and usage of implicit shared classes

Signals and slots

- Observer patterns and signals and slots
- Signal/slots connections using string-based and pointer-based signals/slots
- Connection types and use cases, when to use each type

Meta-object system

- Meta-object concept
- Q_OBJECT use
- QVariant
- Properties

Basic Event Handling

- The event concept
- Differences between events and signal/slots

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- Event handler implementation

Core Classes

- Timers
- String allocation and copying
- Basic string manipulation functions
- Text coding
- Containers: QList and QVector, QMap

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